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R-51-3-3-11

March 22, 1993

Project Number 5538-12

Ms. Maggie Jennis (3HW73)
United States Environmental Protection Agency
841 Chestnut Street
Philadelphia, Pennsylvania 19107

Reference: ARCS III Program
EPA Contract No. 68-W8-0037

Subject: Final Site Report
EPA Work Assignment No. 37-41-3JZZ
Dioxin Sampling Follow-Up Study
EPA ID No. MDD981106768
EPA DSN MD-248
United Rigging and Hauling
Beltsville, Prince Georges County, Maryland

Dear Ms. Jennis:

Submitted herewith is the final site report conducted under the subject work assignment for the United Rigging and Hauling Site. As discussed with EPA's Gregory Ham and in accordance with guidance provided by the Statement of Work and detailed in Section 2.2.2.1 of the work plan for this work assignment, a site visit was not required for this site. Based on information obtained from EPA's removal and CERCLA files and provided by site representatives, the following is offered for EPA's consideration:

- No further action should be considered by EPA at this time. The drums of investigation-derived waste (IDW) generated during the Field Investigation Team (FIT) sampling were disposed during the Emergency Removal action that took place in 1985. These drums were disposed at a permitted landfill.

The information in the EPA files and provided by site representatives includes the following:

The United Rigging and Hauling Site is located on 10 acres of property in the north-central portion of Beltsville, Prince Georges County, Maryland. The facility is an active rigging and hauling contractor that has been in operation since the early 1970s. The facility was also used to store old electrical transformers that were salvaged for their scrap metal value. During the salvage operation, the transformer carcasses were taken to a burn area, and the wire insulation was burned off to reclaim the copper. The burn area measured approximately 100 by 100 feet. The transformers contained polychlorinated biphenyl (PCB) oils as coolants for their internal parts. During operations at the site, transformers allegedly leaked onto the ground.

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R-51-3-3-11

Ms. Maggie Jennis

United States Environmental Protection Agency

March 22, 1993 - Page 2

On March 28, 1985, the Prince Georges County Health Department responded to a complaint about oil in a storm drain adjacent to the site. A sample was taken of the oil and sent to the Maryland Department of Health and Mental Hygiene (MD DHMH) laboratory for analysis. The analysis showed a PCB concentration of 235 ppm.

MD DHMH conducted some additional sampling at the drainage culvert and an unnamed tributary of Indian Creek on April 17, 1985. The laboratory results indicated PCB contamination in the soils and sediment of the storm drain culvert.

On May 1, 1985, MD DHMH executed a search warrant against United Rigging and Hauling in order to obtain operating records. Samples were also obtained from on-site soils. The samples indicated PCB contamination in the soils.

On May 8, 1985, EPA was contacted to conduct a preliminary assessment of the United Rigging and Hauling Site. Emergency actions were required; these actions consisted of runoff control measures, sampling to identify and delineate potential hazardous areas, and initiating security measures.

On May 9, 1985, EPA's Emergency Response Team and the on-scene coordinator, Robert Caron, arrived on site to begin an extent of contamination study and segregate waste material.

On May 20, 1985, Halliburton NUS Corporation (formerly NUS Corporation) conducted a dioxin screening of the 100- by 100-foot burn area. This was to determine if the low-temperature incineration of PCB-contaminated oils in the transformers and the wire insulation created dioxin as an unwanted by-product. A total of 14 on-site soils were sampled. The samples were analyzed for 2,3,7,8-tetrachlorodibenzodioxin (2,3,7,8-TCDD) and its isomers and tetra- through octa-dibenzofurans. All samples showed a non-detect result for 2,3,7,8-TCDD; however, dioxin equivalents from the furan analysis showed concentrations from a non-detect result to 7.53 ppb. During the investigation, two drums of IDW were created; the drums contained boot covers, gloves, Tyvek, respirator cartridges, and excess soils from the sampling. These drums were left on site to be staged with the remainder of the drums of waste being created during the extent of contamination study (see Attachment 1).

On May 29, 1985, a clean-up plan was submitted to EPA by United Rigging and Hauling and Potomac Electric Power Company (PEPCO), the owner of most of the transformers on site.

On June 10, 1985, a meeting was held among representatives of EPA, United Rigging and Hauling, PEPCO, and the state of Maryland to discuss the clean-up plan and the issuance of a consent order to ensure that the work would be conducted according to state regulations and specifications.

On June 25, 1985, a revised clean-up plan was submitted to EPA by United Rigging and PEPCO; 15 ppm PCB was recommended as a background level throughout the site. The background level was acceptable to EPA and the state of Maryland.

On June 26, 1985, a revised Consent Order was accepted by EPA.

On July 25, 1985, a contract was awarded to Chemical Waste Management for a large majority of the clean-up work.

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Ms. Maggie Jennis
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On August 2, 1985, the Consent Order was signed by EPA regional administrator James Seif.

On August 20, 1985, the removal of materials from the site began. On November 4 and 5, 1985, the majority of the cleanup was completed; a total of 420 trucks of debris and soil were removed.

On December 10, 1985, EPA was on site to monitor the cleanup of the site. Hydroseeding took place on site. A total of 531 trucks, including the material from August 20, 1985, of soil and debris were removed from the site.

On December 16, 1985, EPA was again on site to monitor the cleanup of the site. Final grading was underway. PEPCO considered clean-up work to be completed on the site. A total of 552 trucks, including the material from December 10, 1985, of soil and debris had been removed from the site.

On January 6, 1985, EPA was informed that all the manifests had been received from Model City, the disposal site for the wastes. Site work was listed by EPA as being complete.

On October 15, 1987, a Preliminary Assessment was conducted on the site by the state of Maryland Department of the Environment (MDE).

On January 30, 1989, a spill of diesel fuel was reported to MDE by United Rigging and Hauling. An underground storage tank failed a pressure test. A second air pressure test was completed and showed the tank not to be leaking. The two tests were completed on March 9, 1989. A final precision test completed on March 20, 1989 showed the condition of the tank to be acceptable.

On September 28, 1989, Halliburton NUS Field Investigation Team 3 (FIT 3) conducted a site inspection of the United Rigging and Hauling Site. During the inspection, on-site soils, surface water, and sediments were sampled. The sampling showed elevated levels of the following: phenanthrene, fluoranthene, pyrene, benzoic acid, 2,6-dinitro-2-methylphenol, and PCB below the action level (see Appendix B).

No other known regulatory actions have taken place at the site.

If you have any questions, please do not hesitate to call.

Respectfully submitted,



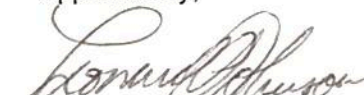
Charles Meyer
Site Manager

Reviewed by,



Andrew Frebowitz
Project Manager

Approved by,



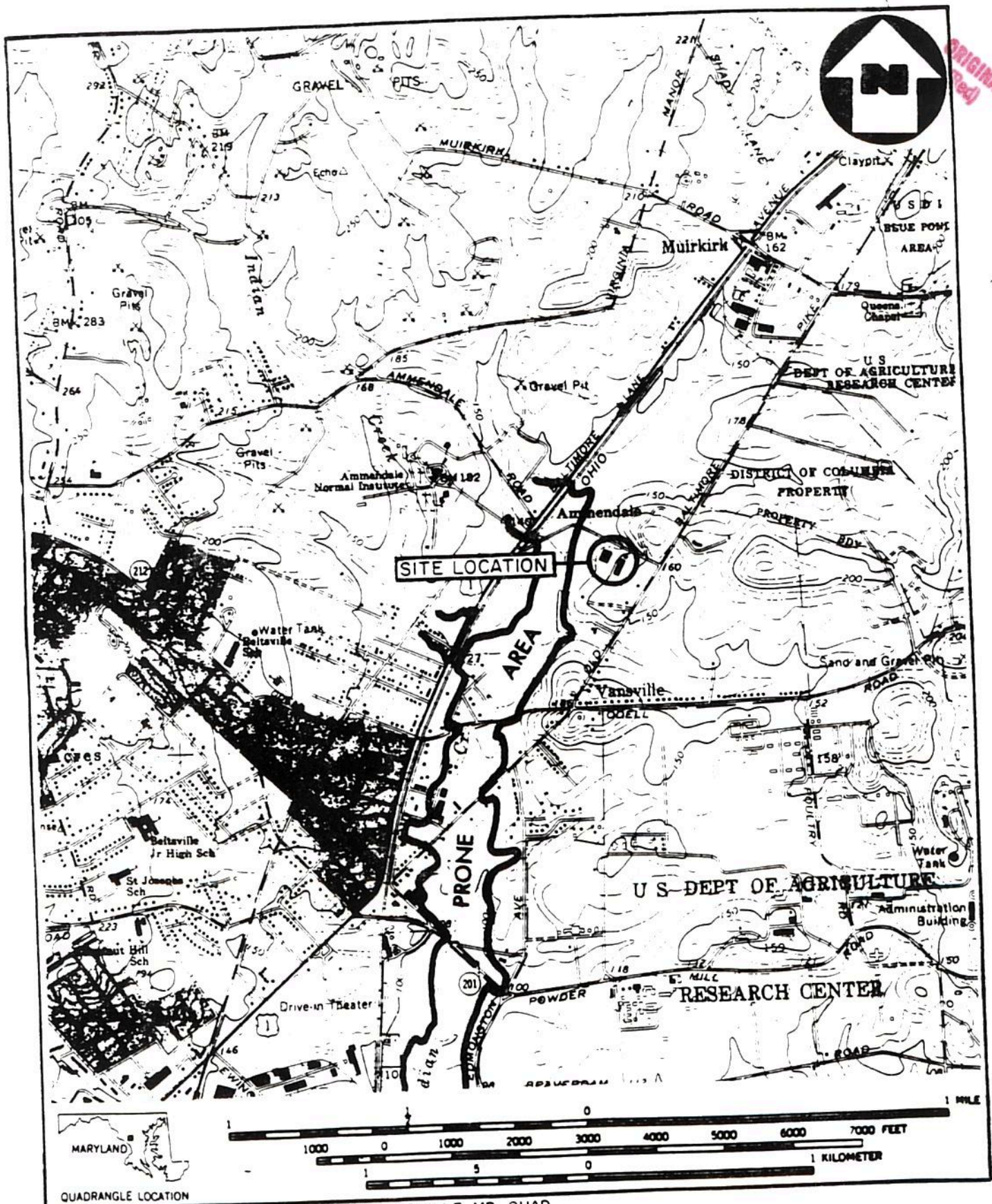
Leonard Johnson
Program Manager, ARCS III

CM/law

1. **Identify the main idea** of the passage.

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APPENDIX A



QUADRANGLE LOCATION
SOURCE: (7.5 MINUTE SERIES) USGS BELTSVILLE, MD. QUAD.

SITE LOCATION MAP
UNITED RIGGING & HAULING, BELTSVILLE, MD.
SCALE 1:24000

FIGURE 1
NUS
CORPORATION
A Halliburton Company

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STREAM

DRAINAGE
DITCH

BURN AREA

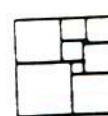
ROAD

SITE SKETCH

UNITED RIGGING & HAULING, BELTSVILLE, MD.

(NO SCALE)

FIGURE 2



NUS
CORPORATION

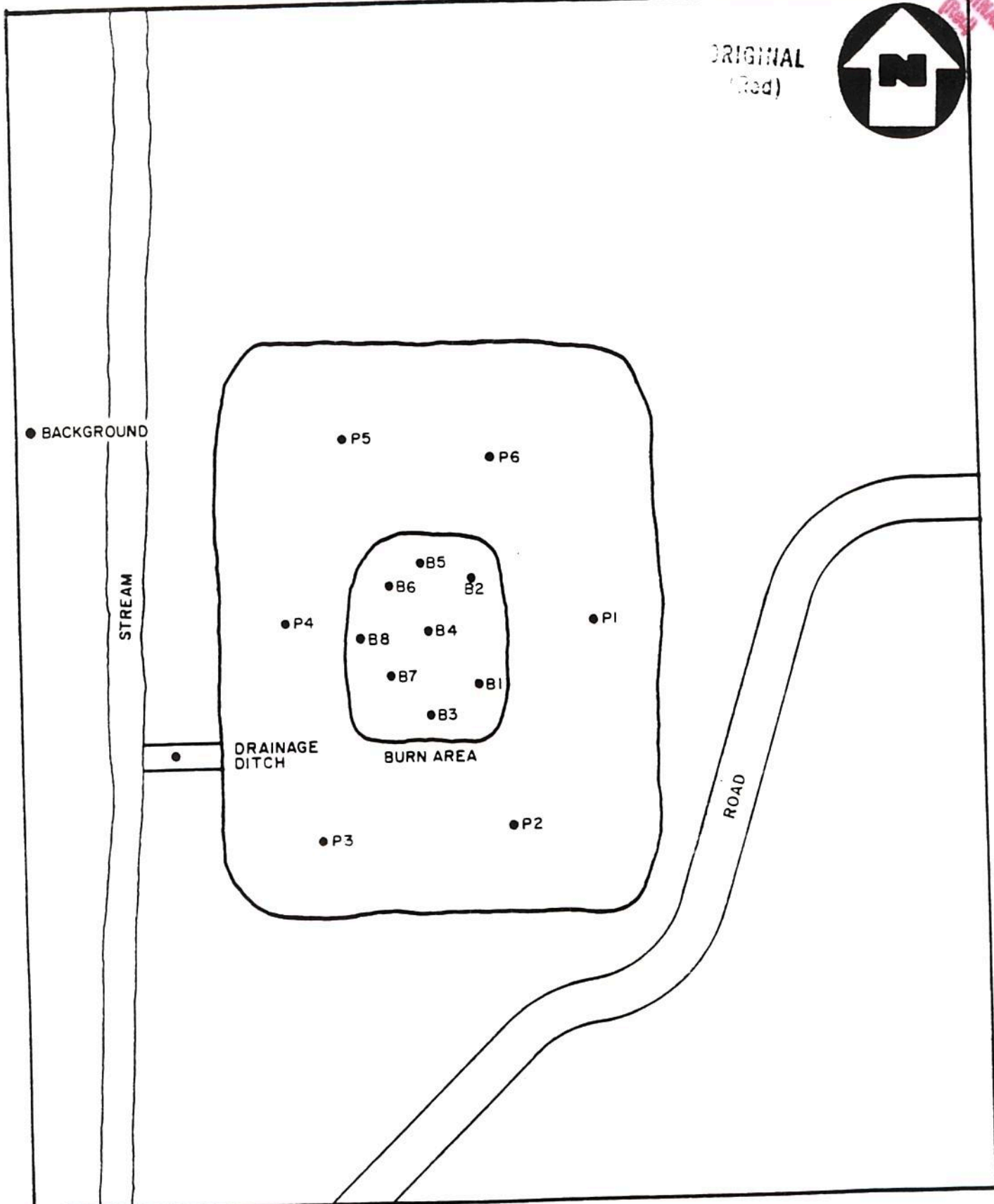


A Halliburton Company

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SAMPLE LOCATION MAP
UNITED RIGGING & HAULING, BELTSVILLE, MD.
(NO SCALE)

FIGURE 3





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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
CENTRAL REGIONAL LABORATORY
839 BESTGATE ROAD
ANNAPOLIS, MARYLAND 21401

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301-224-2740
FTS-922-3752

DATE : June 11, 1985

SUBJECT: Dioxin QA Review Case 4466, United Rigging
DC014501-DC014520

FROM : John Austin (3ES20) *ja*
Chemist

TO : Bob Caron (3HW22)

THRU: Patricia J. Krantz (3ES20) *PK*
DPOQA

Samples DC014501 through DC014520 have been successfully analyzed by California Analytical Laboratories, Inc. No environmental samples were found to exhibit the presence of 2,3,7,8-TCDD. All results are annotated with a "V" to indicate that the results have been verified according to standard Region III dioxin quality assurance review (see attachment 1).

Several reporting errors for m/z 328 areas were noted. In each case, the area reported had not been corrected for the contribution of m/z 322. The corrected areas are as follows:

	m/z 328*
DC014517NS	171141
DC014519	210037

* Corrected for contribution by rating TCDD; 0.9% of m/z 322 subtracted.

The correct areas were used for surrogate recovery calculations by the laboratory.

cc: Walter Lee (3HW12)

ATTACHMENT #1

The quality assurance review performed on each data package consists of a review of all calibrations, ion ratios, column performance checks, duplicate precision, surrogate recoveries and a recalculation of all findings.

Isotope dilution selected ion mass spectrometry was used to test for the presence of 2,3,7,8-TCDD. In order for a result to be reported as dioxin, each of the following criteria had to be met:

1. Retention time (at maximum peak height) of the sample component must be within 3 seconds of the retention time of the $^{13}C_{12}$ -2,3,7,8-TCDD.
2. The integrated ion currents detected for m/z 257, 320 and 322 must maximize simultaneously.
3. The integrated ion current for each analyte and surrogate compound ion (m/z 257, 320, 322, and 328) must be at least 2.5 times background noise and must not have saturated the detector; internal standard ions (m/z 332 and 334) must be at least 10 times background and must not have saturated the detector.
4. Abundance of integrated ion counts detected for m/z 320 must be $\geq 67\%$ and $\leq 87\%$ of integrated ion counts detected for m/z 322.

If any of the above criteria were not met, the result was not reported as dioxin but flagged with the qualifier "EM", representing the estimated maximum possible concentration, and a foot note to the failed criteria.

For samples in which no unlabeled 2,3,7,8-TCDD was detected, the estimated minimum detectable concentration, which is the concentration required to produce a signal with area (or peak height) of 2.5 times the background signal area (or peak height), was reported.

TCDD DATA REPORT
California Analytical Laboratories
2344 Industrial Blvd.
W. Sacramento, CA 95691

Lab: California Analytical Laboratories
Case No. 4466
Batch/Shipment No.

Report Date: 6-7-85
Column: SP-2330 60M X 0.32mm

Cal Lab ID	Sample Number	Aliquot C Wet Wt. U (grams)	PPB TCDD Reas	PPB TCDD Det. Lmt	Inst ID	Date	Time	320/ 322	332/ 334	PPB Surrg Reas	Surrg X Acc't	320	322	257	328*	332	334	Comments
T3061MBR1	METHOD BLANK	Y 10.00	ND	0.023	8	06/07/85	09:40:00	1.00	0.04	1.06	106	4901	4890	.	548363	1122410	1336640	✓
T3044	DC014501	Y 10.00	ND	0.051	8	06/05/85	09:52:00	1.00	0.80	1.20	120	.	.	.	77057	136797	170673	✓
T3045	DC014502	Y 9.91	ND	0.10	8	06/05/85	10:26:00	1.00	0.79	1.24	123	.	.	.	41031	70259	89250	✓
T3046	DC014503	Y 10.01	ND	0.28	8	06/05/85	10:51:00	1.00	0.82	1.22	122	.	.	.	20455	35927	43983	✓
T3047	DC014504	Y 10.05	ND	0.33	8	06/05/85	11:11:00	1.00	0.81	1.27	128	.	.	.	15240	25464	31373	✓
T3048	DC014505	Y 11.05	ND	0.19	8	06/05/85	14:07:00	1.00	0.80	0.93	102	.	.	.	32097	66650	82961	✓
T3049	DC014506	Y 10.85	ND	0.064	8	06/05/85	14:29:00	1.00	0.81	1.08	117	.	.	.	78581	143473	176539	✓
T3050	DC014507	Y 10.25	ND	0.20	8	06/05/85	14:54:00	1.00	0.79	1.12	115	.	.	.	25330	46264	58600	✓
T3051	DC014508	Y 9.95	ND	0.19	8	06/05/85	15:27:00	1.00	0.79	1.10	110	.	.	.	25344	48472	61696	✓
T3052	DC014509	Y 9.96	ND	0.041	8	06/05/85	15:47:00	1.00	0.81	1.17	117	.	.	.	93808	171970	212096	✓
T3053	DC014510	Y 9.98	ND	0.13	8	06/05/85	16:26:00	1.00	0.82	1.07	107	.	.	.	31259	62785	76591	✓
T3054	DC014511	Y 10.00	ND	0.048	8	06/05/85	16:44:00	1.00	0.82	1.11	111	.	.	.	82157	158683	193850	✓
T3055	DC014512	Y 10.95	ND	0.071	8	06/05/85	17:09:00	1.00	0.81	1.05	115	.	.	.	68806	127856	157243	✓
T3056	DC014513	Y 10.14	ND	0.039	8	06/05/85	17:27:00	1.00	0.80	1.13	115	.	.	.	125768	232749	290931	✓
T3057	DC014514	Y 10.26	ND	0.18	8	06/05/85	17:47:00	1.00	0.79	1.13	116	.	.	.	54489	98744	125484	✓
T3058	DC014515	Y 9.69	ND	0.029	8	06/05/85	18:07:00	1.00	0.80	1.21	118	.	.	.	162209	291965	366356	✓
T3059	DC014516	Y 10.29	ND	0.016	8	06/05/85	18:55:00	1.00	0.80	1.14	117	.	.	.	204558	369197	462512	✓
T3060	DC014517	Y 9.89	ND	0.018	8	06/05/85	19:38:00	1.00	0.82	1.15	113	.	.	.	269908	512821	622610	✓
T3060MS	DC014517MS	Y 10.63	0.96	.	8	06/05/85	20:17:00	0.79	0.81	0.97	103	67208	84672	53280	171903	353795	439299	✓
T3061	DC014518	Y 10.02	ND	0.21	8	06/05/85	21:00:00	1.00	0.80	1.17	117	.	.	.	15325	27681	34753	✓
T3061D	DC014518DUP	Y 10.21	ND	0.36	8	06/05/85	21:18:00	1.00	0.78	1.05	107	.	.	.	8488	16635	21300	✓
T3062	DC014519	Y 10.14	7.6	.	8	06/05/85	21:46:00	0.81	0.80	1.13	114	581785	722072	476251	216536	390759	487353	✓
T3063R12	DC014520	Y 100.00ml	ND	0.0009	8	06/06/85	17:53:00	1.00	0.79	0.10	101	.	.	.	565959	1178280	1493230	✓

MB = Method Blank
P = Partial Scan/Confirmatory Analysis
MS = Native TCDD Spike
D = Duplicate/Fortified Field Blank
RI = Re-injection
FB = Field Blank
ND = Not Detected
DL = Detection Limit
RX = Re-extraction

*Corrected for contribution by native TCDD; 0.9% of m/z 322 subtracted

** PE SAMPLE TRUE VALUE = 8.67
90% C.I. not available
(interval for TV=8.2 is 6.2-10.0)
V = Verified Result

FORM B-1

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California Analytical Laboratories
Initial Calibration Summary

	Injection Date	Injection Time	Standard ID	NATIVE RRF	SURROGATE RRF	VALLEY
PC	03/27/85	09:19:00	01850327			4.47
CC1	03/27/85	09:42:00	81850327	.93	1.03	
	03/27/85	11:58:00	81850327E	.93	1.10	
	03/27/85	14:42:00	81850327H	.94	1.06	
			Mean	.933	1.068	
CC2	03/27/85	10:07:00	81850327A	.93	1.03	
	03/27/85	12:15:00	81850327F	.93	1.01	
	03/27/85	15:07:00	81850327K	.94	1.11	
			Mean	.949	1.047	
CC3	03/27/85	10:24:00	81850327B	.93	.98	
	03/27/85	12:54:00	81850327D	.93	1.00	
	03/27/85	15:24:00	81850327L	.98	1.10	
			Mean	.988	1.028	
CC4	03/27/85	10:45:00	81850327C	.94		
	03/27/85	13:20:00	81850327H	.97		
	03/27/85	15:54:00	81850327M	.96		
			Mean	.954		
CC5	03/27/85	11:04:00	81850327D	.93		
	03/27/85	13:57:00	81850327I	.96		
	03/27/85	16:11:00	81850327D	.93		
			Mean	.954		
PC	03/27/85	16:33:00	01850327A			4.41
			Over-all Means:	.944	1.048	
			Std deviations:	.0283	.0466	

Solution ID Codes:

PC = Performance check solution
 CC1 = Concentration calibration solution #1 = 0.2 ug/ml
 CC2 = Concentration calibration solution #2 = 1.0 ug/ml
 CC3 = Concentration calibration solution #3 = 5.0 ug/ml
 CC4 = Concentration calibration solution #4 = 20.0 ug/ml
 CC5 = Concentration calibration solution #5 = 40.0 ug/ml

FORM 8-2

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(ad)

Walter Lee
ORIGINAL
11-SEP-85

To: S.WASSERSUG (EPA9370)
From: CRL/REG.III (EPA9385) Posted: Wed 11-Sep-85 11:43 EDT Sys 63 (56)
Subject: United Rigging and Hauling - Sample DC014514

Memo W. Lee, United Rigging&Hauling, Sample DC014514 9/11 PK

September 11, 1985

United Rigging and Hauling - Sample DC014514

Patricia J. Krantz (3ES20)
DPO QA

Walter Lee (3HW12)
Environmental Scientist

Regarding your question related to the apparent discrepancy between the standard CLP dioxin analysis (ND) and the value reported with the isomer analysis (1.7), we have evaluated the data sets and believe that the "ND" is the proper value to use for decision making purposes. Our recommendation is based on the following

- I) The CLP method is the only "endorsed" method for dioxin analysis. The CAL isomer method is non-validated and experimental.
 - II) The only value generated where all identification and QC criteria are met is the ND determination. The isomer analysis had 1) no surrogate recovery, 2) saturated columns, 3) interfering peaks, and 4) was not confirmed by the second column. Since different solvents, columns and interpretative criteria were used, it is not surprising that a discrepancy might exist.
- For the reasons stated above, we believe the ND value to be the most quantitatively accurate determination available.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION III
CENTRAL REGIONAL LABORATORY
839 BESTGATE ROAD
ANNAPOLIS, MARYLAND 21401

301-224-2740
FTS-922-3752

DATE : September 10, 1985

SUBJECT: United Rigging and Hauling, Case 4466/1721C
Total Furan and Dioxin Isomer Analyses

FROM : Charles S. Sands (3ES20) CS
Chemist

TO : Walter F. Lee (3HW12)
Environmental Scientist

THRU : Patricia J. Krantz (3ES20) PK
DPO QA

The attached tables include verified and non-verified dioxin and furan data. "Verified" means that we obtained the same value upon doing the calculations that the laboratory reported. Still not verified are: 1) 2,3,4,7,8 penta furans, 2) most hepta and octa furans, and 3) all C137-2,3,7,8 TCDD surrogates.

The analyses consist of monitoring of selected ion masses. Target compound identification was based upon the following factors: target compounds had to display the correct ion masses in a specified ion ratio and display a retention time approximate to that of C13-labeled analogs (this means the target compound must elute from the column within a certain interval from C13-labeled internal standards).

Twelve C13-labeled internal standards and one C137-labeled surrogate standards were utilized, and this caused unique analytical problems.

- (1) C13-labeled furans had the same masses (the crucial ones that were monitored) as masses of unlabeled dioxin target compounds. As examples, C13-labeled hexa furans contained mass 390, which was also the mass being used to monitor hexa dioxins. C13-labeled hepta furans contained masses 424 and 426, which were target masses of hepta dioxins. Octa furan internal standards contained mass 458, also found in octa dioxins.

A phone conversation with the laboratory determined that areas used in calculations were often not integrator-generated areas, but manually determined areas that were less than instrument areas. These areas were corrected for internal standards by factors that were not documented. Different individuals worked on calculating this case, and calculation procedures were not uniform between individuals.

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- (2) Problems with the other identification criteria, ion ratios, also occurred. Ions to be monitored were usually of the form m , $m+2$, $m+4$..., where m , $m+2$, and $m+4$ were masses resulting from the isotopic abundance of chlorine atoms in nature. A hexa furan might have a theoretical literature ion ratio of 1.2 [$m/(m+2)=1.2$]. The target compound would have a ratio of 1.2, but the internal standards' ratio would be 0.5. The reviewer would believe that there was a problem with the identification criteria. However, phone conversations with the laboratory revealed the lab was changing monitored ion ratios from $m/(m+2)$ to $(m+2)/(m+4)$ for internal standards to avoid interferences between C_{13} -labeled internal standards and adjacent dioxin classes. This occurred in hexa, hepta, and octa furans, but was not fully documented by the lab.
- (3) Octa furans and octa dioxins had the previously mentioned problems. In addition, the peaks did not separate and were very broad. Other than ion interferences, the peaks were so wide they were not integrated uniformly by the instrument and areas were not consistent. Manual areas were utilized for these classes.
- (4) Sample DC014519 had a verified 2,3,7,8-TCDD value of 6.8 ppb. This was a performance sample with a true value of 8.67 ppb. The laboratory determined value was within the acceptable range.
- (5) Samples DC014503 and DC014518 were field duplicates and DC014518 was a laboratory duplicate. Significantly different results for total penta and hexa furans were noted. Sample DC014516, a background soil contained hexa furans and octa dioxins.

Isomer specific dioxin and furan analyses are state of the art techniques that are undergoing development. Set procedures for analyses and data-evaluation have not been formulated and are resource intensive. If further review efforts are required, please contact Pat Krantz.

TDD Number |

EPA Number

Site Name

Date of Sample

☐ Inorganic ☐ Organic

Organic

Compounds Detected

Sample Number	Sample Description and Location	Phase	Units	20778 TC DF	total TC DF	12378 PC DF	23478 PC DF	total PC DF	123971 HC DF	total HC DF	1239678 HC DF	23478 HC DF	total HC DF	Remarks
	D041501	NY	ND	0.46		0.12	0.24	11.0	2.7	60				
	D041502					0.04		0.98	0.38	20				
	03							0.17		31				
	04					0.084		6.3	0.18	9.4				
	05													
	06			0.046	0.75	0.38		29.8	2.6	69				
	07							5.2	0.18	10.0			1.2	
	08				2.8			90.6						
	09			0.081	1.5			33.5	1.0	77.4				
	10			0.040	0.64			16.1	0.37	29.0				
	11				0.48			12.8	0.29	25.7				
	12			2.53	8.8			204						
	13			0.19	3.6			47.0	0.97	67.5				
	14			2.6	52.1	22.0		96.7						

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

ver. 100

SAMPLE DATA SUMMARY
TARGET COMPOUNDS

TDD Number

EPA Number

Site Name

Date of Sample

☐ Organic ☐ Inorganic

FUM

DOXINS

Compounds Detected

Sample Number	Sample Description and Location	Phase	Units	Total Furans	TCDD	total furans	12378 furans	12379 furans	12378 furans	12379 furans	total furans	12378 furans	12379 furans	total furans	Remarks
00145 01				20			0.084	0.084		0.09		2.1	3.8		
02							0.067	0.067		0.16		3.9	6.8	19.5	
03												0.92	1.6	8.3	
04				0.26			0.048	0.048		0.089		2.9	5.1	25.0	
05															
06							0.061	0.061		0.19		3.1	5.6	22	
07												2.1	3.7		
08				1.8			0.21	0.21		0.49		8.0	14.2	50.9	
09				2.6						0.065		1.4	2.6	9.6	
10				0.72								0.77	1.4	6.5	
11				0.73						0.091		1.0	1.9	8.0	
12				18.3						1.3	3.4	7.6	14.8	37.5	ORIGINAL (Red)
13				1.2			0.085	0.085		0.26		2.8	5.4	18.3	ORIGINAL (Red)
14				160.			3.4	3.4		2.7	9.0	15.6	33.2	54.6	

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

TDD Number	
EPA Number	

Site Name _____
Date of Sample _____

☐ Inorganic ☐ Organic

Compounds Detected

Sample Number	Sample Description and Location	Phase	Units
D0145 ¹⁵			0.65 186
D0145 ¹⁶			0.007 0.031 0.016 0.48
17			0.007 0.007 0.007 0.075
17N			0.19 0.20 0.20 0.38
18			0.014 0.016 0.030 0.92
18D			0.083 0.16 0.037 0.82
19			
20			
NB 20			
(174) NBX V			
VK			
B			
W			

SAMPLE DATA SUMMARY TARGET COMPOUNDS

[illegible]

TD0 Number	EPA Number
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

☐ Organic ☐ Inorganic

Date of Sample

Flem

Doxins

Compounds Detected

[illegible]

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

◊ Denotes results of questionnaire's qualitative significance based upon qualitative assurance review of data

FURANS
SAMPLE DATA SUMMARY
TARGET COMPOUNDS

~~NOT~~ ~~Verified~~

Name _____

Day of Sample

☐ Organic ☐ Inorganic

TDO Number

EPA Number

Compounds Detected

Sample Number	Sample Description and Location	Phase	Units	2278 TC DF	total TC DF	12378 PC DF	23478 PC DF	total PC DF	123978 H C DF	total H C DF	123978 TC DF	Remarks
2014501												9.4 1.2 20
2014502				0.07								1.3 0.21 5.9
03				0.065								0.54 1.8
04												1.5 0.12 4.3
05												
06				0.24								4.9 0.79 21
07												0.27 1.4
08				0.71					2.3 222			17.1 3.2 74.8
09				0.27								6.4 1.3 25.8
10				0.12								2.5 0.26 7.7
11				0.11								1.8 0.27 7.2
12				24					402 657			72.9 72.9 294
13				0.40								6.2 0.66 20.1
14				21.5					26 1520			283 554 1300

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

TDO Number	EPA Number
-------------------	-------------------

Site Name	Date of Survey
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
21	22
23	24
25	26
27	28
29	30
31	32
33	34
35	36
37	38
39	40
41	42
43	44
45	46
47	48
49	50
51	52
53	54
55	56
57	58
59	60
61	62
63	64
65	66
67	68
69	70
71	72
73	74
75	76
77	78
79	80
81	82
83	84
85	86
87	88
89	90
91	92
93	94
95	96
97	98
99	100

☐ Organic ☐ Inorganic

Compounds Detected

0.097 21/76 10:07 202 * EPA CRL ANNAPOLIS

NOTE: For a re-le

If this data and non-target, testatively identified compounds, please see the Analytical Quality Assurance section of this report

TDD Number _____
EPA Number _____

Site Name _____
Date of Sample _____

1

SAMPLE DATA SUM W/OUT
TARGET COMPONENTS

Five

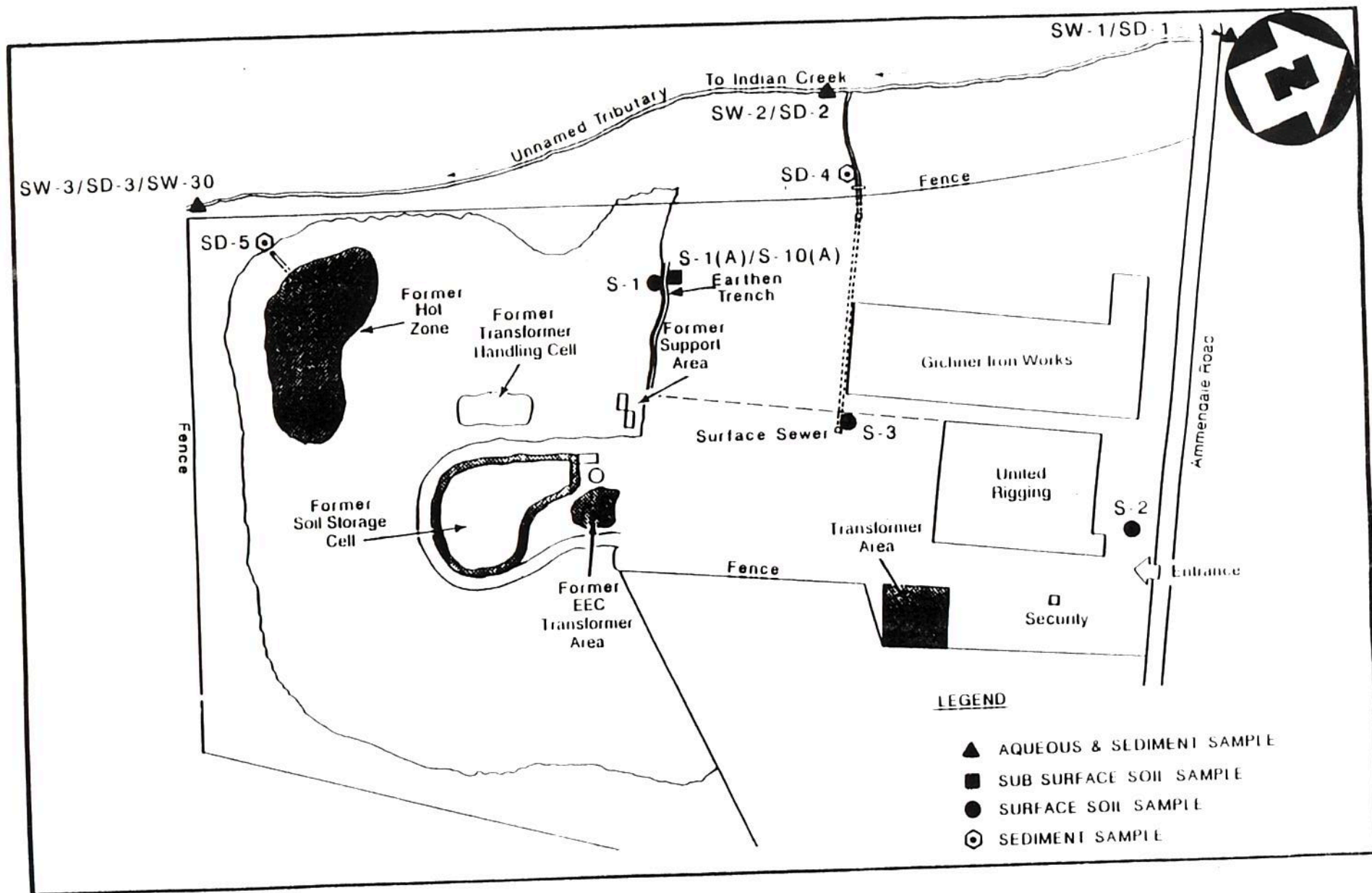
[illegible]

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

◇ Denotes results of questionable qualitative significance based upon quality assurance review of data.

APPENDIX B

ORIGINAL
(Red)



SAMPLE LOCATION MAP
UNITED RIGGING & HAULING, BELTSVILLE, MD
 (NO SCALE)

FIGURE 5.1

ORIGINAL
(Red)

SITE NAME: UNITED RIGGING AND HAULING
TOD NUMBER: F3-8908-12
LAB NAMES: ORGANIC/ IT TERRITOS

SAMPLING DATE(S): 9/28/89
CASE NUMBER: 12826

STATE/COUNTY CODE: 24/44
EPA NUMBER: MD 248

INORGANIC/ SKINER

SAMPLE NUMBER:	CZ811	CZ812	CZ813	CZ814	CZ817	CZ818
SAMPLE ID:	SW-1	SW-2	SW-3	SW-30	AQ BLNK	SD-1
LOCATION:	UNNAMED TRIB UPSTREAM INTERMITTENT CLOUDY	UNNAMED TRIB UPSTREAM INTERMITTENT CLOUDY	UNNAMED TRIB DOWNSTREAM INTERMITTENT CLOUDY	DUP OF SW-3	BLANK	MATCHED SW-1 FINE GRAIN
PH:	5.9	5.5	5.5	5.5	6.2	NONE-BKGRD
FIELD MEASUREMENTS:	NONE-BKGRD	NONE-BKGRD	NONE-BKGRD	NONE-BKGRD		63.0%
PERCENT SOLIDS:						
TYPE OF DATA: ***** VOLATILES						
DILUTION FACTOR:	1.0	1.0	1.0	1.0	1.0	1.0

DET. LIMIT (RQL) (=IDL)	SAMPLE NUMBER:	CZ811	CZ812	CZ813	CZ814	CZ817	CZ818
	UNITS:	ug/l	ug/l	ug/l	ug/l	ug/l	ug/kg
10.00 chloromethane		8.00			10.00		8.00
10.00 chloroethane			5.00	12.00	5.00	5.00	3.00
5.00 methylene chloride					30.00		17.00
10.00 acetone		36.00					
5.00 chloroform		9.00					
5.00 carbon tetrachloride		1.00				1.00	
5.00 trichloroethene			1.00				
TYPE OF DATA: ***** SEMIVOLATILES							
DILUTION FACTOR:		1.0	1.0	1.0	1.0	1.0	1.0

DET. LIMIT (RQL) (=IDL)	SAMPLE NUMBER:	CZ811	CZ812	CZ813	CZ814	CZ817	CZ818
	UNITS:	ug/l	ug/l	ug/l	ug/l	ug/l	ug/kg
50.00 benzoic acid							380.00
10.00 naphthalene							480.00
10.00 2-methylnaphthalene							64.00
10.00 acenaphthylene							170.00
10.00 dibenzofuran							72.00
10.00 fluorene							
50.00 4,6-dinitro-2-methylphenol							750.00
10.00 phenanthrene							100.00
10.00 anthracene							560.00
10.00 fluoranthene							820.00
10.00 pyrene							340.00
10.00 benzo(a)anthracene							550.00
10.00 chrysene							
10.00 bis(2-ethylhexyl) phthalate							780.00
10.00 benzo(b)fluoranthene							320.00
10.00 benzo(a)pyrene							120.00
10.00 indeno(1,2,3-cd)pyrene							190.00
10.00 benzo(g,h,i)perylene							
TYPE OF DATA: ***** PESTICIDES							
DILUTION FACTOR:		1.0	1.0	1.0	1.0	1.0	2.0

DET. LIMIT (RQL) (=IDL)	SAMPLE NUMBER:	CZ811	CZ812	CZ813	CZ814	CZ817	CZ818
	UNITS:	ug/l	ug/l	ug/l	ug/l	ug/l	ug/kg
0.05 beta-BHC							
0.50 alpha-chlor-1242							
1.00 alpha-chlor-1260							
Comments: *****							

ORIGINAL
Redi
Stamp

SITE NAME: UNITED RIGGING AND HAULING
TOD NUMBER: F3-8908-12
LAB NAMES: ORGANIC/ 11 CERRITOS

SAMPLING DATE(s): 9/28/89
CASE NUMBER: 12826

STATE/COUNTY CODE:
EPA NUMBER:

24/33
MD 240

ORIGINAL
(Red)

INORGANIC/ SKINER

SAMPLE NUMBER:		MCAA55	MCAA56	MCAA57	MCAA58	MCAA61	MCAA62
SAMPLE ID:		SW-1	SW-2	SW-3	SW-30	AQ BLNK	SD 1
LOCATION:		UNNAMED TRIB UPSTREAM INTERMITTENT CLOUDY	UNNAMED TRIB UPSTREAM INTERMITTENT CLOUDY	UNNAMED TRIB DOWNSTREAM INTERMITTENT CLOUDY	DUP OF SW-3	BLANK	MATCHES SW 1 FINE GRAIN
PH:		5.9	5.5	5.5	5.5	6.2	NONE - BKGRD
FIELD MEASUREMENTS:		NONE - BKGRD	NONE - BKGRD	NONE - BKGRD	NONE - BKGRD		60.7%
PERCENT SOLIDS:							
TYPE OF DATA: ***** INORGANICS		1.000	1.000	1.000	1.000	1.000	1.000
DILUTION FACTOR: : GFAA		1.000	1.000	1.000	1.000	1.000	1.000
: ICP		1.000	1.000	1.000	1.000	1.000	1.000
: Hg		1.000	1.000	1.000	1.000	1.000	1.000
: CN		1.000	1.000	1.000	1.000	1.000	1.000
DET. LIMIT		MCAA55	MCAA56	MCAA57	MCAA58	MCAA61	MCAA62
CRQL (=IDL)		ug/l	ug/l	ug/l	ug/l	ug/l	mg/kg
SAMPLE NUMBER:		1110.00	1350.00	2210.00	1620.00	27.50	5180.00
UNITS:		16.70			16.50	20.00	5.40
200.00	aluminum						5.60
60.00	antimony						1180.00
10.00	arsenic	280.00	240.00	292.00	300.00		0.67
200.00	barium						2370.00
5.00	beryllium	23900.00	21700.00	22900.00	25000.00	79.00	3060.00
5000.00	calcium	22.40	20.00	29.60	30.60		7.40
10.00	chromium						43.20
50.00	cobalt	13.50	18.40	15.60	8.00		25400.00
25.00	copper	2740.00	2580.00	3030.00	3160.00	28.60	1280.00
100.00	iron	22.20	20.70	19.80	18.60	2.30	679.00
5.00	lead (anal. by GFAA)	6140.00	5510.00	5700.00	6150.00		397.00
5000.00	magnesium	180.00	83.00	93.80	92.90		0.17
15.00	manganese						10.10
0.20	mercury	7.60					597.00
40.00	nickel	4910.00	4590.00	5000.00	5270.00		
5000.00	potassium	2.60				100.00	258.00
5.00	selenium	13900.00	12200.00	12000.00	13000.00		28.60
5000.00	sodium	6.10	5.60	6.10	5.70		505.00
50.00	vanadium	141.00	220.00	164.00	111.00	17.00	12.50
20.00	zinc						
10.00	cyanide						
Comments: *****							

Revised
Red

SITE NAME: UNITED RIGGING AND HOISTING
TDD NUMBER: F3 8908 12
LAB NAMES: ORGANIC/ IN INERTIOS

SAMPLING DATE(S): 9/28/89
CASE NUMBER: 12820

STATE/COUNTY CODE: 24 33
EPA NUMBER: MD 248

INORGANIC/ SKINER

	CZ819	CZ820	CZ821	CZ822	CZ823	CZ824
SAMPLE NUMBER:	SD-2	SD-3	SD-4	SD-5	S-1	S-11A)
SAMPLE ID:			SEWER PIPE	DRAINAGE PIPE	ON SITE	MATCHES S-1
LOCATION:			AT DISCHARGE	AT DISCHARGE	IND-ACSS	4 FELT
	MATCHES SW-2	MATCHES SW-3	NO AQ SAMP	NO AQ SAMP	EARTH TRENCH	SANDS, CLAY
	MED GRAIN	FINE GRAIN	OILY ODOR	HEAVY GRAIN	FINE-COARSE	
PH:						
FILLED MEASUREMENTS:	NONE-BKGRD	NONE-BKGRD	NONE-BKGRD	NONE-BKGRD	NONE-BKGRD	NONE-BKGRD
PERCENT SOLIDS:	76.0%	73.0%	73.0%	97.0%	93.0%	85.0%
TYPE OF DATA: ***** VOLATILES	.....	.....	.....	.....	.....	.....
DILUTION FACTOR:	1.0	1.0	1.0	1.0	1.0	1.0

DEF. LIMIT	SAMPLE NUMBER:	CZ819	CZ820	CZ821	CZ822	CZ823	CZ824
CRQL (=IDL)	UNITS:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
10.00 chloromethane							
10.00 chloroethane		8.00	13.00	8.00	9.00	8.00	8.00
5.00 methylene chloride		17.00	16.00	26.00	10.00	8.00	10.00
10.00 acetone							
5.00 chloroform							
5.00 carbon tetrachloride							
5.00 trichloroethene							
TYPE OF DATA: ***** SEMI-VOLATILES	
DILUTION FACTOR:		1.0	1.0	10.0	1.0	1.0	1.0

DEF. LIMIT	SAMPLE NUMBER:	CZ819	CZ820	CZ821	CZ822	CZ823	CZ824
CRQL (=IDL)	UNITS:	ug/kg	ug/kg	ug/l	ug/kg	ug/kg	ug/kg
50.00 benzoic acid							
10.00 naphthalene							
10.00 2-methylnaphthalene							
10.00 acenaphthylene							
10.00 dibenzofuran							
10.00 fluorene							
50.00 4,6-dinitro-2-methylphenol			120.00				
10.00 phenanthrene							
10.00 anthracene			120.00				
10.00 fluoranthene			96.00				
10.00 pyrene							
10.00 benzo(a)anthracene							
10.00 chrysene			73.00	5700.00			
10.00 bis(2-ethylhexyl) phthalate							
10.00 benzo(b)fluoranthene							
10.00 benzo(a)pyrene							
10.00 indeno(1,2,3-cd)pyrene							
10.00 benzo(g,h,i)perylene							
TYPE OF DATA: ***** PESTICIDES	
DILUTION FACTOR:		2.0	1.0	10.0	1.0	2.0	1.0

DEF. LIMIT	SAMPLE NUMBER:	CZ819	CZ820	CZ821	CZ822	CZ823	CZ824
CRQL (=IDL)	UNITS:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
0.05 beta-BHC		490.00			14.00		
0.50 alpha-chlor-1242		920.00	260.00	3600.00	260.00	710.00	340.00
1.00 alpha-chlor-1260							
Comments: *****	

Red
TINING

SITE NAME: UNITED RIGGING AND HAULING
 TDD NUMBER: F3-8908-12
 LAB NAMES: ORGANIC/ IT CERRITOS

SAMPLING DATE(S): 9/28/89
 CASE NUMBER: 12826

STATE/COUNTY CODE:
 EPA NUMBER:

24/31
 MD 248

ORIGINAL
 (Red)

INORGANIC/ SKINER

SAMPLE NUMBER:		MCAA63	MCAA64	MCAA65	MCAA66	MCAA67	MCAA68
SAMPLE ID:		SD-2	SD-3	SD-4	SD-5	S-1	S-1(A)
LOCATION:				SEWER PIPE AT DISCHARGE NO AQ SAMP OILY ODOR	DRAINAGE PIP AT DISCHARGE NO AQ SAMP HEAVY GRAIN	ON SITE IND-ACSS EARTH TRENCH FINE-COARSE	MATCHES SW-1 4 FEET
		MATCHES SW-2 MED GRAIN	MATCHES SW-3 FINE GRAIN				SANDY CLAY
PH:		NONE-BKGRD	NONE-BKGRD	NONE-BKGRD	NONE-BKGRD	NONE-BKGRD	NONE-BKGRD
FIELD MEASUREMENTS:		77.6%	74.6%	72.1%	97.3%	85.5%	92.5%
PERCENT SOLIDS:		1.000	1.000	1.000	1.000	1.000	1.000
TYPE OF DATA: ***** INORGANICS		1.000	1.000	1.000	1.000	1.000	1.000
DILUTION FACTOR: : GFAA		1.000	1.000	1.000	1.000	1.000	1.000
: ICP		1.000	1.000	1.000	1.000	1.000	1.000
: Hg		1.000	1.000	1.000	1.000	1.000	1.000
: CN		1.000	1.000	1.000	1.000	1.000	1.000
DELT. LIMIT		MCAA63	MCAA64	MCAA65	MCAA66	MCAA67	MCAA68
CRQL (@=100)		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
200.00	aluminum	1210.00	2390.00	1880.00	663.00	1630.00	783.00
60.00	antimony	4.60	3.40	4.30	1.50	4.10	3.80
10.00	arsenic	1.60	1670.00	53.50	4.90	13.70	3.90
200.00	barium	67.00	0.50				
5.00	beryllium	30100.00	4600.00	43700.00	188000.00	136000.00	44900.00
5000.00	calcium	79.40	942.00	181.00	10.10	18.00	10.20
10.00	chromium	11.60	6.20	21.60	5.70	4.70	3.60
50.00	cobalt	17.00	13.80	170.00	4.30	7.20	6.80
25.00	copper	7710.00	10100.00	35200.00	3340.00	9370.00	3460.00
100.00	iron	42.70	176.00	117.00	5.20	5.60	1.90
5.00	lead (anal. by GFAA)	12800.00	1160.00	19600.00	56800.00	22100.00	7130.00
5000.00	magnesium	99.50	401.00	211.00	128.00	160.00	45.60
15.00	manganese						
0.20	mercury	60.20	7.40	235.00	80.20	65.50	69.60
40.00	nickel	241.00	259.00	287.00	305.00	325.00	184.00
5000.00	potassium						
5.00	selenium	46.20	99.70	70.40	90.20	111.00	37.20
5000.00	sodium	35.30	20.20	67.40	4.70	14.70	9.60
50.00	vanadium	112.00	436.00	760.00	17.20	495.00	6.20
20.00	zinc		5.00				
10.00	cyanide						
Comments: *****							

ORIGINAL
 (Red)

SITE NAME: UNITED RIGGING AND HAULING
TDD NUMBER: F3-8908-12
LAB NAMES: ORGANIC/ IT CERRITOS

SAMPLING DATE(S): 9/28/89
CASE NUMBER: 12826

STATE/COUNTY CODE: 24/33
EPA NUMBER: MD-248

INORGANIC/ SKINER

	SAMPLE NUMBER: CZ825	CZ826	CZ827	CZ828	CZ829
	S-10(A)	S-2	S-3	S-BACK	AQTRIPBLANK
	LOCATION:	on site	ON-SITE	OFF-SITE	BLANK
		ind-acss	IND-ACSS	OPEN ACCESS	
		vegetated	SEWER GRATE	VEGETATED	
	DUP OF S-1(A)	silty loam	SANDY, CLAYEY	SANDY, CLAYEY	VOA ONLY
PH:		none > BKGRD	NONE > BKGRD	NONE > BKGRD	
FIELD MEASUREMENTS:		80.0%	96.0%	86.0%	
PERCENT SOLIDS:	90.0%				
VOLATILES	.....	.....	.....	.....	.....
DILUTION FACTOR:	1.0	1.0	1.0	1.0	1.0

DET. LIMIT	SAMPLE NUMBER:	CZ825	CZ826	CZ827	CZ828	CZ829
CRQL (@=IDL)	UNITS:	ug/kg	ug/kg	ug/kg	ug/kg	ug/l
10.00 chloromethane						
10.00 chloroethane						
5.00 methylene chloride		9.00	7.00	6.00	5.00	5.00
10.00 acetone		14.00	10.00	9.00	13.00	
5.00 chloroform						
5.00 carbon tetrachloride						
5.00 trichloroethene						
SEMI-VOLATILES
DILUTION FACTOR:		1.0	1.0	10.0	1.0	1.0

DET. LIMIT	SAMPLE NUMBER:	CZ825	CZ826	CZ827	CZ828	CZ829
CRQL (@=IDL)	UNITS:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
50.00 benzoic acid						
10.00 naphthalene						
10.00 2-methylnaphthalene						
10.00 acenaphthylene						
10.00 dibenzofuran						
10.00 fluorene						
50.00 4,6-dinitro-2-methylphenol			2000.00		210.00	
10.00 phenanthrene						
10.00 anthracene			59.00		190.00	
10.00 fluoranthene			70.00		290.00	
10.00 pyrene					99.00	
10.00 benzo(a)anthracene					150.00	
10.00 chrysene						
10.00 bis(2-ethylhexyl) phthalate					160.00	
10.00 benzo(b)fluoranthene			88.00		89.00	
10.00 benzo(a)pyrene						
10.00 indeno(1,2,3-cd)pyrene					41.00	
10.00 benzo(g,h,i)perylene						
PESTICIDES
DILUTION FACTOR:		1.0	1.0	5.0	1.0	1.0

DET. LIMIT	SAMPLE NUMBER:	CZ825	CZ826	CZ827	CZ828	CZ829
CRQL (@=IDL)	UNITS:	ug/kg	ug/kg	ug/kg	ug/kg	ug/l
0.05 beta-BHC				1100.00		
0.50 alpha-chlor 1242				1100.00		
1.00 alpha-chlor 1240		340.00	60.00			
Comments:

MD-248
F3-8908-12
9/28/89

SITE NAME: UNITED RIGGING AND HAULING
 TDD NUMBER: F3-B908-12
 LAB NAMES: ORGANIC/ IT CERRITOS

SAMPLING DATE(S): 9/28/89
 CASE NUMBER: 12826

STATE/COUNTY CODE:
 EPA NUMBER:

24/33
 MD-248

ORIGINAL
 (red)

INORGANIC/ SKINER

SAMPLE NUMBER:	MCAA69	MCAA70	MCAA71	MCAA72
SAMPLE ID:	S-10(A)	S-2	S-3	S-BACK
LOCATION:		on site	ON-SITE	OFF-SITE
		ind-acss	IND-ACSS	OPEN ACCESS
		vegetated	SEWER GRATE	VEGETATED
		silty loam	SANDY, CLAYEY	SANDY, CLAYEY
	DUP OFS-1(A)			
PHE:				
FIELD MEASUREMENTS:		none > bkgrd	NONE > BKGRD	NONE > BKGRD
PERCENT SOLIDS:	90.5%	81.2%	95.5%	85.2%
TYPE OF DATA: *****	INORGANICS			
DILUTION FACTOR: : GFAA	1.000	1.000	1.000	1.000
: ICP	1.000	1.000	1.000	1.000
: Hg	1.000	1.000	1.000	1.000
: CN	1.000	1.000	1.000	1.000

DET. LIMIT	SAMPLE NUMBER:	MCAA69	MCAA70	MCAA71	MCAA72
CRQL (e=IDL)	UNITS:	mg/kg	mg/kg	mg/kg	mg/kg
200.00	aluminum	856.00	5070.00	2380.00	5030.00
60.00	antimony	4.00	6.20		4.80
10.00	arsenic	0.74	2.50	2.60	4.90
200.00	barium	3.10	35.10	19.20	28.90
5.00	beryllium		0.38		0.36
5000.00	calcium	13400.00	1180.00	35400.00	2410.00
10.00	chromium	4.50	23.80	26.00	57.10
50.00	cobalt	1.80	3.60	4.10	5.20
25.00	copper	3.10	12.90	17.60	38.90
100.00	iron	3560.00	14500.00	9180.00	25700.00
5.00	lead (anal. by GFAA)	0.95	48.50	59.30	43.80
5000.00	magnesium	2320.00	816.00	8940.00	1460.00
15.00	manganese	20.80	208.00	94.20	159.00
0.20	mercury				
40.00	nickel	21.10	6.00	55.10	21.40
5000.00	potassium	90.80	430.00	222.00	338.00
5.00	selenium				
5000.00	sodium	72.90	58.00	67.10	47.70
50.00	vanadium	8.60	32.10	26.80	32.90
20.00	zinc	9.10	39.41	111.00	56.40
10.00	cyanide				

ORIGINAL
 (red)